

CLAIMS

1. A transformed bone marrow-related cell introduced with a vector carrying a gene, wherein the cell is associated with the maintenance and/or repair of a tissue.

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2. The transformed bone marrow-related cell of claim 1, wherein the gene is a marker gene, or has a function of directly participating in the maintenance and/or repair of a tissue, or of assisting a function of the transformed bone marrow-related cell in maintaining and/or repairing a tissue.

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3. The transformed bone marrow-related cell of claim 2, wherein the gene with the function of directly participating in the maintenance and/or repair of a tissue, or of assisting a function of the transformed bone marrow-related cell in maintaining and/or repairing a tissue, encodes a protein or a peptide having an activity of controlling the differentiation or proliferation of a cell or of controlling a cellular function, wherein the protein or the peptide is selected from the group consisting of HGF, FGF, VEGF, PDGF, interleukin, GCSF, MCSF, SCF, IFN, Crx, and Otx2.

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4. The transformed bone marrow-related cell of any one of claims 1 to 3, wherein the vector is an adenoviral vector or a Sendai virus vector.

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5. The transformed bone marrow-related cell of claim 4, wherein the adenoviral vector carries an HGF gene.

6. The transformed bone marrow-related cell of claim 4, wherein the Sendai virus vector carries an FGF2 gene.

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7. The transformed bone marrow-related cell of claim 4, wherein the Sendai virus vector carries an IFN gene.

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8. The transformed bone marrow-related cell of any one of claims 1 to 7, wherein the bone marrow-related cell is a bone marrow cell or a bone marrow-derived cell.

9. The transformed bone marrow-related cell of any one of claims 1 to 8, wherein the tissue is a diseased tissue.

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10. The transformed bone marrow-related cell of claim 9, wherein the disease is a liver disease.

11. The transformed bone marrow-related cell of claim 10, which reduces a level of a serum liver enzyme.

12. The transformed bone marrow-related cell of claim 9, wherein the disease is a cancer.

13. The transformed bone marrow-related cell of claim 12, wherein the cancer is a hepatic cancer.

14. The transformed bone marrow-related cell of any one of claims 1 to 13, for injection into a peripheral blood vessel.

15. A method for preparing a transformed bone marrow-related cell, comprising the step of using a vector carrying a gene to introduce the gene to a bone marrow-related cell taken from a mammal.

16. Use of a recombinant vector carrying a gene for preparing a transformed bone marrow-related cell.

17. A pharmaceutical agent for the maintenance and/or repair of a tissue, comprising the transformed bone marrow-related cell of any one of claims 1 to 14.

18. An agent for treating a liver disease, comprising the transformed bone marrow-related cell of claim 10.

19. The agent for treating a liver disease of claim 18, wherein the liver disease is a hepatopathy, hepatic insufficiency, cirrhosis, or hepatitis.

20. The agent for treating a liver disease of claim 18, wherein the liver disease is a hepatic cancer.

21. The agent for treating a liver disease of claim 18 or 19, wherein the gene is an HGF or an FGF2.

22. The agent for treating a liver disease of claim 18 or 20, wherein the gene is an IFN.

23. The agent for treating a liver disease of claim 18, wherein the vector is an adenoviral
5 vector or a minus-strand RNA viral vector.

24. The agent for treating a liver disease of claim 23, wherein the vector is a
minus-strand RNA viral vector deficient in the F gene.

10 25. A method for manufacturing an agent for treating a liver disease, comprising the step
of preparing a composition comprising the transformed bone marrow-related cell of claim 10 and
a pharmaceutically acceptable medium.

15 26. The method of claim 25, wherein the liver disease is a hepatopathy, hepatic
insufficiency, cirrhosis, or hepatitis.

27. The method of claim 25, wherein the liver disease is a hepatic cancer.

20 28. The method of claim 25 or 26, wherein the gene is an HGF or FGF2.

29. The method of claim 25 or 27, wherein the gene is an IFN. .

25 30. The method of claim 25, wherein the vector is an adenoviral vector or a
minus-strand RNA viral vector.

31. The method of claim 30, wherein the vector is a minus-strand RNA viral vector
deficient in the F gene.